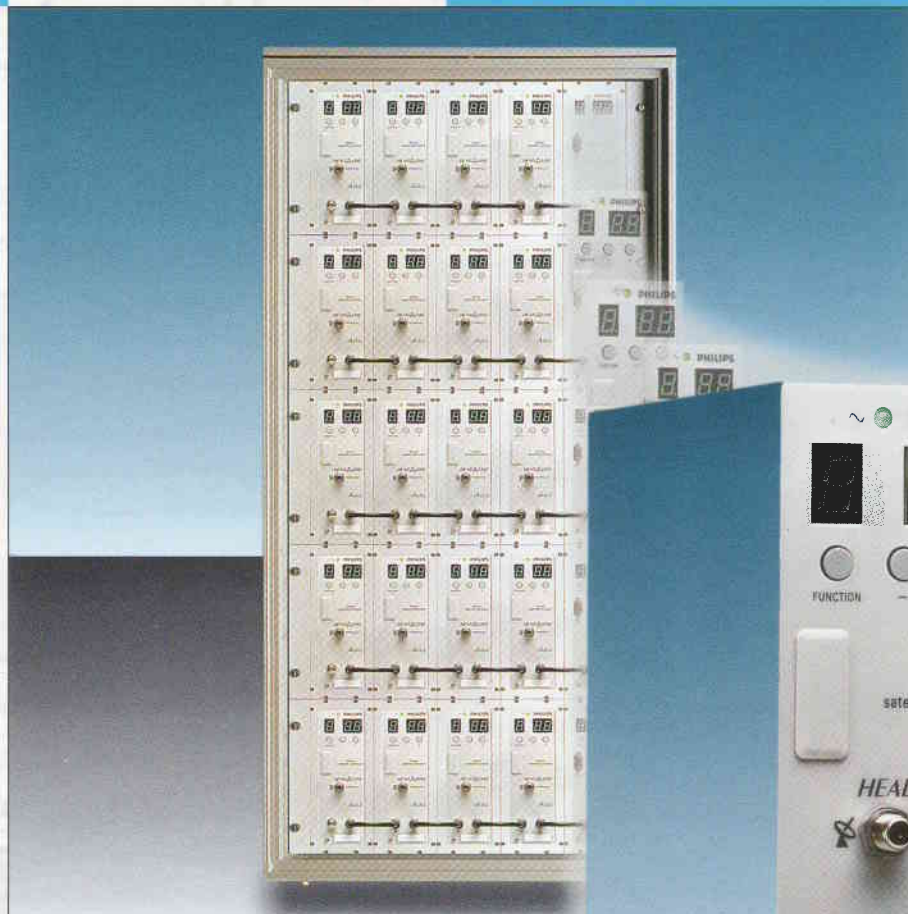


Headline Head End Processors Range



HEAD●LINE AGILE

**Agile solutions for
every head end application**

Let's make things better.

Philips
Broadband
Networks



PHILIPS

Philips SMATV is now Fracarro.

Headline: agile solutions to your head end requirements.

The new Headline range of head end modules live up to their name in more ways than one:

- **Agile through their high flexibility**

Headline offers you a complete choice of modules to create any required system configuration.

- **Agile through broad coverage of application needs**

Headline handles both terrestrial and satellite reception, from collective antenna systems up to small and medium-size networks with several thousand outlets.

- **Agile through compact dimensions and versatile mounting possibilities**

You can always find room for a Headline system, even in the smallest cupboard or cabinet.

- **Agile through full-frequency coverage**

The same basic Headline modules can handle all channels, so there's no need to use filters or dedicated channel modules.

With the Headline range, Philips Broadband Networks offers the complete, flexible solution for any head end applications. These compact modules can be combined in the desired configuration to provide exactly the required functionality and channel count.



- **FREQUENCY-AGILE**

The Headline modules are frequency-agile at both input and RF output, allowing all channels to be handled by only a few basic modules. This simplifies installation and maintenance, and eliminates the need to stock separate modules for every single channel.

- **SIMPLICITY**

The basic Headline satellite processor has around 160 preset satellite programmes, as well as the standardized output channels. All that is needed to set up a programme is to tune the preset RF output channel, choose one of the preset satellite TV programmes and adjust the output level. Of course a manual override gives the user complete control for other set-ups.

Simplicity is further enhanced by the SAW-filtered amplitude modulation technology for vestigial sideband response, allowing installers to implement adjacent channel frequency allocations, thereby maximizing the number of channels that can be achieved on the network.

- **ENHANCED PERFORMANCE**

Noise problems caused by low C/N at the edge of the footprint are eliminated by a dual IF filter. Software-selectable narrow and wide positions allow varying deviations (MHz/V) of different satellites to be compensated, enabling precise picture setting for excellent results. It goes without saying that the Headline range is suitable for KU- and C-band reception.

The RF output level has been increased to 85 dBµV, or 17.8 mV, further optimizing signal quality.

- **STEREO HANDLING**

Both A2 stereo broadcasts and dual tone processing are standard on the PAL B/G modules, with automatic recognition of A2 and dual tone by the satellite processors.

The B/G modulators allow A2 stereo sound distribution from all kinds of local sources. Audio volume is independently software-adjustable for each programme to maximize subscriber comfort.

- **STAND-ALONE**

All the Headline units are stand-alone modules, each with its own microprocessor and power supply in the same housing. If any one module fails, only that programme is lost while the rest of the head end continues to operate normally for maximum system integrity and reliability, avoiding disturbance to subscribers' viewing enjoyment.

- **VERSATILE MOUNTING**

Headline offers a choice of mounting solutions to meet users' individual requirements: rail-mounts for single units or with three or six slots, and a standard economy or fully professional 19" rack-mount kit with five slots.



STEREO SATELLITE PROCESSOR

The compact multistandard satellite processor converts PAL and SECAM satellite signals into a terrestrial VHF or UHF channels, and modulates them into the desired frequency band. The dual IF bandwidth and KU- and C-band selectability provide coverage of all main world frequency band standards.

PAL - SECAM TRANSCODER

This unit handles transcoding of composite video PAL signals from a satellite demodulator into SECAM video signals. The transcoder is transparent to incoming SECAM signals.

RF MODULATOR

By modulating video signals from a VCR or other programme source into RF channels, the RF modulator allows network operators like hotel owners, hospitals or small communities to create additional local programming opportunities.

TERRESTRIAL CONVERTER

The terrestrial converter allows reallocation of frequencies in the head end to achieve the desired frequency plan to avoid echos.

It converts any channel from 47 - 860 MHz, with any modulation type, into another channel. Level stability is maintained by an AGC.

The converter is transparent to NICAM and A2 stereo sound signals.



FM FILTER AMPLIFIER

The filter amplifier is a dedicated module that allows operators to add FM radio channels to their networks. One module enables perfect reception of all channels, so that the complete FM band is distributed to subscribers. Includes amplification and filtering for distribution of a high-quality signal at the right level.

COMBINER AMPLIFIER

Allowing the RF signal to be distributed to a larger number of outlets, this unit combines the signals from terrestrial modulators and satellite processors, forming the last stage in the Headline signal-processing chain before distribution to subscribers. Two or more amplifiers can be combined to further increase the channel count by using a splitter.

RF MULTISTANDARD DEMODULATOR

This module demodulates terrestrial RF signals, providing a baseband A/V output for monitoring or for recording, for example when a transmitted programme is to be distributed later. The demodulator can also be used when network operators want to add their own scrambling information. The optional RS-232 input enables full PC control when used in business environments.

HEADLINE
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GENERAL SPECIFICATIONS

DISPLAY	3 x 7-segment display and power-on LED	
OPERATING CONDITIONS	Temperature (operating)	-5 to +50 °C
	Temperature (storage)	-25 to +70 °C
	Power supply	198 to 264 VAC, 50 Hz
	Relative humidity	0 to 95%
	Operation	24 h/24 h
DIMENSIONS	H x W x D	200 x 68 x 185 mm
	Weight	1.3 kg approx.
MTBF	>> 50,000 h	

STEREO SATELLITE PROCESSOR

IF INPUT	Bandwidth	950 to 2150 MHz (step = 1 MHz)
	LNB remote power supply	15 V ± 1 V, 300 mA max.
	Level	-30 to -60 dBm
	Impedance	75 Ω
AUDIO	Connector type	'F' female
	Automatic recognition of stereo A2, dual tone or mono (line 16)	
	Sub-carrier frequency range	5.5 to 10 MHz
	Synthesis step	10 kHz
	Bandwidth	40 Hz to 15 kHz
	Nominal audio deviation	(±) 17.8, 30, 62.5, 150 kHz
RF OUTPUT	De-emphasis	50 μs, 75 μs, J17 (Wegener Panda compatible)
	Level	70 to 85 dBμV
	Modulation type	AM - VSB
	Spectral purity	> 60 dB from 47 to 870 MHz
OPTIONS	S/N	53 dB (weighted), C/N = 18 dB Input deviation 22 MHz/V
	BNC connector on IF	IF in/out into 75 Ω
	Sub-D socket	Audio in/out + CVBS in/out + Baseband in/out

TERRESTRIAL CONVERTER

INPUT	RF	47 to 860 MHz (step = 250 kHz)
	Level	60 to 90 dBμV
	Impedance	75 Ω
	Tuning	Frequency synthesized
	Connector type	'F'
OUTPUT	Level	70 to 85 dBμV
	Impedance	75 Ω
	S/N	> 53 dB (Input C/N = 60 dB)
	Tuning	Frequency synthesized (accuracy ± 30 kHz)
	Connector type	'F'

RF MODULATOR

INPUT	RF	CVBS
	Level	1 V _{pp}
	Impedance	75 Ω
	Tuning	Audio in: 774 mV RMS/5 KΩ
	Connector type	Sub-D
OUTPUT	Band	I, III, Hyper and UHF
	Level	70 to 85 dBμV
	Impedance	75 Ω
	S/N	55 dB
	Tuning	Frequency synthesized (accuracy ± 30 kHz)
	Connector type	'F'

RF MULTISTANDARD DEMODULATOR

INPUTS	Bandwidth	47 to 862 MHz (step = 250 kHz)
	Level	60 to 90 dB μ V (UHF 4 and 5); 60 to 100 dB μ V (others)
	Impedance	75 Ω
	Tuning	Frequency synthesized
	AFC	± 1 MHz nominal
	VSWR	< 170 MHz: < 4
		170 to 300 MHz: < 4
		300 to 470 MHz: < 3
		> 470 MHz: < 4
	LO leakage to input	< 46 dB μ V
OUTPUTS	Connector type	'F' female
	Phantom power supply	12 V, 100 mA (software-switchable with short-circuit protection)
	Bandwidth	5 MHz
	Amplitude	1 Vpp $\pm 10\%$
	Signal type	CVBS
	Impedance	75 Ω
	DC offset (at sync level)	0.8 V typ.
	Differential gain	5% typ.
	Differential phase	7° typ.
	Group delay	110 ns typ. B/G version
AUDIO OUTPUT		70 ns typ. D/K version
	Luminance non-linearity	2.5%
	S/N (weighted for 70 dB μ V input level)	> 54 dB
	Connector type	15-pin sub-D
	Bandwidth	40 Hz to 15 kHz
	Output impedance	< 60 Ω
	Output level for max. deviation or modulation (0 dBm into 600 Ω)	774 mV RMS ± 3 dB
	Connector type	15-pin sub-D

PAL-SECAM TRANSCODER FM FILTER AMPLIFIER COMBINER AMPLIFIER

INPUTS	CVBS PAL	Bandwidth 88 to 108 MHz	4 inputs
	Sub-D connector	'F' connector	47 to 862 MHz
	Load 75 Ω	Load 75 Ω	
OUTPUTS	CVBS SECAM	Adjustable from	Typ. output level:
	Sub-D connector	12 dB to +8 dB	117 dB μ V (DIN B)
	Load 75 Ω		Typ. gain: 35 dB

ACCESSORIES

RAILS	3-slot	SIG 9122
	6-slot	SIG 9112
	1-slot (Orion/Headline adapter)	SIG 9118
	Professional 19" rack-mount kit	SIG 9113
	Semi-professional 19" rack	SIG 9125
	Cable plate 1U	SIG 9124



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ORDERING INFORMATION

STEREO SATELLITE PROCESSOR

VHF-I	B/G:SIG 9150;D/K:SIG 9174 *
VHF-III	B/G:SIG 9151;D/K:SIG 9175;L:SIG 9154 *
Hyperband	B/G:SIG 9152;D/K:SIG 9180;L:SIG 9155 *
UHF IV & V	B/G:SIG 9153;D/K:SIG 9176;L:SIG 9156;I:SIG 9159 *

(*) Input IF bandwidth : SIG 9xxx/011 27/33 MHz - SIG 9xxx/001 18/27 MHz

TERRESTRIAL CONVERTER

VHF-I	SIG 8157 (B/G, D/K and I)
VHF-III	Broadband: SIG 8154 (L) Narrow band: SIG 8158 (B/G, D/K and I)
Hyperband	Broadband: SIG 8155 (L) Narrow band: SIG 8159 (B/G, D/K and I)
UHF IV & V	Broadband: SIG 8156 (L) Narrow band: SIG 8160 (B/G, D/K and I)

RF MODULATOR

VHF-I	B/G: SIG 8165; D/K: SIG 8174
VHF-III	B/G: SIG 8166; D/K: SIG 8175; L: SIG 8169
Hyperband	B/G: SIG 8167; D/K: SIG 8180; L: SIG 8170
UHF IV & V	B/G: SIG 8168; D/K: SIG 8176; L: SIG 8171; I: SIG 8172

RF MULTISTANDARD DEMODULATOR

B/G, D/K, M/N	SIG 8192
L-I	SIG 8193
RS-232 remote control interface	SIG 8195

PAL - SECAM TRANSCODER	SIG 9110
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FM FILTER AMPLIFIER	SIG 8123
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COMBINER AMPLIFIER	SIG 9130
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As one of the major suppliers of CATV and SMATV equipment in the world, Philips Broadband Networks has built its reputation on the development and manufacture of innovative, high-quality products in combination with an effective service and support network. PBN offers a wide range of products and systems for broadband access networks to deliver video, audio, data and telephony services to subscribers. PBN is committed to uncompromising quality, dedicated to providing the best products and services available on the broadband market today. The company is certified according to the ISO 9001 quality standard to ensure the delivery of products and services of consistently high quality.

Quality in  Quality out

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